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Pedagogical bricolage and teacher agency: towards a culture of creative professionalism

Introduction

The question that interests us here is how teachers' professional identities can be located within a theoretical discourse that recognises the unique characteristics of teachers' professionalism and the manifold ways in which their work is undertaken. We will approach this question by way of Claude Lévi-Strauss's anthropological exploration of how knowledge is constructed and shared and suggest some of the ways in which his concept of *bricolage* offers a pertinent and productive model for teachers' professional behaviour and standards, particularly with reference to their status as agents of transformative learning with a view to learners' experiencing social and personal change.

By considering the two opposed forms of action Lévi-Strauss outlines, and the dimensions and implications of each, we will explore the possibilities for conceiving teacher agency as an essentially aesthetic set of dispositions and behaviours, as well as the positive and dynamic opportunities offered by such a conception.

As examination of Lévi-Strauss's ideas about these two opposing ways in which humans engage with the world around them will show, there is a significant ideological dimension to the modes of practice and thought associated with both the *bricoleur* and its structural opposite, the *engineer*. We will argue that each is a form of agency in its own right and explore the parallels and differences between these two modes of action and thought before proceeding to look at how the rhetoric of teacher professionalism may usefully engage with the qualities and competences associated most particularly with Lévi-Strauss's description of the *bricoleur*.

Naming, utility and the problem of sharing knowledge

In the opening chapter of 'The Savage Mind' (1966), Lévi-Strauss points out the differences across peoples and cultures with regard to their utilisation of language and development of concepts for making sense of the world; how some create taxonomic structures within which sub-classifications can flourish, while others create vastly complex micro-naming inventories based on individual properties and differences rather than similarities or types. He sees this basic difference as being one that is allied to the idea of abstract thought. Taxonomic strategies require abstraction in order to be effective; we must understand that a tree is a form of plant-life, with certain generic characteristics (substantial size, leaves, branches, trunk, roots and so on) before we can say that an oak is a kind of tree. However, we do not need this abstract concept of 'tree' in order to recognise an oak as distinct from an ash.

Examination of the properties of each would allow recognition both of their difference and of their specificities. Lévi-Strauss is at pains to point out the error of applying value judgements to either form of thinking and linguistic usage, arguing that every society has a tendency to 'overestimate the objective orientation of its thought' (Lévi-Strauss, 1966, p. 3). There are benefits to both systems. While taxonomic structures are predicated on a level of thought that may be considered complex, since these establish and describe relationships between a multiplicity of individual elements, micro-naming systems may be seen as establishing richer, more immediate and therefore more meaningful forms of knowledge. To know a tree is a broad, generalised form of recognition and understanding. To know an oak is a narrower but more detailed one.

For a people whose day to day existence, their very survival, is predicated upon a firm and detailed understanding of their natural environment, the benefits of abstract ideas may be less important than their tangible observations. Utility, Lévi-Strauss suggests, may be a key driver in the impulse to name certain kinds of things and not others, yet through analysis of a

series of examples culled from his extensive anthropological reading, he draws an alternative conclusion: ‘animals and plants are not known as a result of their usefulness; they are deemed to be useful or interesting because they are first of all known.’ (Lévi-Strauss, 1966, p. 9) He goes on to contend that this course of events is unlikely to have much to do with scientific or objective understanding because, at this level, naming has no practical effect on events; its function is one that is intellectual rather than practical in nature. It does not resolve a physical problem or need but rather enables thought and communication to function more effectively within a social group. Thus, utility is discovered prior to naming, while naming is a precursor to sharing knowledge. An agreed name for an identified thing permits communal understanding. The process may be seen as a rudimentary pedagogical formation and therefore valuable on this basis alone.

Perhaps somewhat paradoxically, given his concerns about value judgements, Lévi-Strauss goes on to argue in favour of the need for classificatory structures, though he is open about the form these may take. The creation of names is, in itself, a classificatory process. The ability to organise and classify concepts is, he says, ‘superior to chaos’ (Lévi-Strauss, 1966, p. 15) and offers social groupings the building blocks of coherent social order. Such classifications need not be scientific in type. Aesthetics can also offer a valid source of understanding (for example by facilitating organisation of objects via flavour, colour, shape or texture) since even an idiosyncratic and conditional form of ordering conserves the abundance and variety of the cluster of specifics it describes.

An example cited in ‘The Savage Mind’ concerns the poisonous nature of bitter juices. While our scientific knowledge formations allow us to be alert to the fact that not every poison tastes bitter and not every bitter taste is poisonous, in those societies where the aesthetic knowledge formation of the bitterness/poison relationship has been established as true, not ingesting bitter flavours brings its own rewards. Bitter poisons are avoided. Bitter

and unpleasant flavours are also avoided. Whether sweet-tasting poisons are ingested is beside the point. Agreement within a community that elements must be acknowledged and circumscribed enables the development of a collective ‘memory bank’ (Lévi-Strauss, 1966, p. 16) of knowledge. This is how classifications and traditions of knowledge are established and perpetuated within a given community. Again, Lévi-Strauss offers us a sense of how learning is socially constructed, offering this as a universal structure observable across diverse peoples and places. Knowledge, as he describes it here, does not exist objectively. It is subjectively created and this subjective creation is shared across social groupings through linguistic formations generated precisely for that purpose.

The corollary of this conception of naming and knowing is that it is necessarily restricted in scope. To adapt Wittgenstein’s aphorism, (‘the limits of my language means the limits of my world’ (Wittgenstein, 1922, p. 74)) limits on naming means limits on knowledge. To have a greater number of words to describe a greater number of things or types of things must therefore imply greater knowledge.

Yet, the further implication here is that we are discussing degrees of limitation, not full knowledge versus partial knowledge. Knowledge, when regarded as a function of language, must always be a relative idea, hence Lévi-Strauss’s comments regarding every culture’s overestimation of the sense of its own objectivity (Lévi-Strauss, 1966, p. 3). The question this raises is one of value. How significant is this knowledge in terms of utility? Is there any meaningful benefit to abstraction beyond the conceptual? Lévi-Strauss divides his response, perceiving there to be two strands to what we may characterise as applied learning, each of which corresponds with a different measure and quality of naming and knowledge. These two approaches to knowledge are characterised in the form of the ‘*bricoleur*’ (p. 16) and the ‘*engineer*’ (p. 19).

The *bricoleur* searches for practical methods to solve problems making use of what is available or ready to hand, developing strategies, adapting materials and creatively interpreting a possible outcome from the ‘heterogeneous objects of which his treasury is composed’ (Lévi-Strauss, 1966, p. 18). The *engineer*, on the other hand, must have specific tools and resources, a plan, a defined method and a precise vision of the expected outcome. In both cases, creation of a solution is the goal. What differs is the quality of resources accessed, the amount of complexity dealt with and the level of abstraction conceptualised. Both are generative and both require a significant level of cognitive funding. A positive outcome is possible via either method. Where they differ is in the level of systematisation required to facilitate the desired result. To relate this distinction to an earlier point, the *bricoleur* may be seen as making use of subjective and aesthetic formations of knowledge, while the *engineer* may be seen as aiming for greater objectivity and making use of a scientific knowledge base. In relation to teacher professionalism, we begin to see the *bricoleur* teacher as inventive and imaginative, making unique use of the resources and opportunities to hand, while the *engineer* teacher may put greater store in complying with officially sanctioned, tried and tested approaches to their work.

Bricoleur and engineer as forms of agency

Setting *bricoleur* and *engineer* as oppositional ideas in a limited conceptual space creates its own challenges. If objectivity is always relative, perhaps it is more an intention than an achievement, which makes the role of the *engineer* a questionable one. The *engineer*, as much as the *bricoleur*, is limited by the tools available to complete the task in hand. Where the *engineer’s* role more meaningfully differentiates itself from that of the *bricoleur* is in its ideological underpinning (Johnson, 2012), as will be shown. Rather than seeing the

opposition as one that is defined by the realities of experience, we may wish to reinterpret the dichotomy as a fluid conscription of ideas gathered under a pair of descriptive headings.

The *engineer* is associated with planned outcomes, precision tooling, impersonal design and amoral utility; the *engineer's* service is to a source of authority beyond him/herself. Lévi-Strauss suggests a parallelism between the *engineer* and the scientist, procedural and methodological, driven by the desire to evidence a hypothesis or actualise a concept. The *engineer's* work is thus an effective tool of state or other authoritarian force, which subjects the individual to implicit forms of control.

By contrast, the *bricoleur* is associated with the freedom of broadly conceived outcomes that meet a clear purpose, unspecified methodologies and playfulness, personalised design and service to internalised moral and ethical imperatives. The *bricoleur* is aesthetically driven; an artist or artisan, innovative and resourceful, intrinsically motivated to make best use of available resources and guided by personal experience and his/her own perceptiveness.

These associations cast the roles of *engineer* and *bricoleur* as distinct politicised identities, insofar as each engages with a particular perspective on methods and purposes. Viewed this way, the characteristics of the *bricoleur* and *engineer* are not merely descriptive terms encapsulating a simple binary. Each term embodies a complex matrix of ideas, ways of thinking and associated approaches to practice. As a result, we begin to see *bricoleur* and *engineer* as forms of agency, where agency is defined in simple terms as ‘what people do’ (Robinson, 2012).

[Table 1 here.]

Discussion in connection with teacher agency as a particular subset of the broader concept suggests the importance of the influence of environment. Teacher agency is, in some quarters, seen as an ecological system, where agents can only act and react within the

boundaries of their context; cultural, political, economic and institutional (Biesta, Priestley & Robinson, 2016; Biesta & Tedder, 2007; Buchanan, 2015; Philpott & Oates, 2017). This ecology also has a temporal dimension, where the past influences the present, and orientations towards the future drive action, alongside individuals' professional identities and sense of personal efficacy, constructed within the social domain (Bergh & Wahlström, 2017; Biesta, Priestley & Robinson, 2015; Bridwell-Mitchell, 2015; Emirbayer & Mische, 1998; Tao & Gao, 2017).

Similarly, the *bricoleur* and the *engineer*, as modes of action, are delimited by temporal and social context. Neither mode can exist in a vacuum. Neither is eternal or unchanging. Both modes may, from this perspective, be regarded as ontological structures anchored in the turbulence of cultural tides, with a greater or lesser degree of flexibility. The concepts of the *bricoleur* and the *engineer* are both, in their own ways, engaged in an ongoing debate about the value of agency as a manifestation of individual freedom and personal choice.

A further characteristic of these modes of agency lies in their proximity to their objectives. The *bricoleur*, in Lévi-Strauss's interpretation, is in close touch with the material needs s/he is seeking to meet. There is immediacy in the relationship between agency and outcome in the operation of the *bricoleur*. This nearness is a correlative of lack of abstraction. The specific requirements of the situation and the instincts, experience and intelligence of the *bricoleur* determine what action is taken and what means or methods are used in the process. Within the context of teaching, this could mean the recognition and understanding of individual learners' needs and the desire to develop a range of pedagogical approaches in order to meet these. By contrast, the engineer's object is a preordained product that is conceived as a pure form and prescribed by a blueprint of perfection, to borrow from Plato (2007), which must be, by default, abstract because it is an ideal. Within the context of teaching, this might mean an assessment-focussed or cognitivist form of pedagogy that

defines success as the passing of a test or achievement of a shared, defined objective. The *engineer* identifies as a conduit through which this ideal can be realised and may put faith in tried and tested teaching methodologies in order to reach this goal. The *bricoleur* recognises the impracticality of actualising an ideal and perhaps questions the importance of this, instead valuing incremental progress and striving. Viewed in this way, it becomes clear that these two kinds of agency involve a variety of cognitive skills that are directly connected not only to habits of practice and intention but also to perceptions of identity.

For Lévi-Strauss, there is not only an oppositional relation but also a causal relation between the two types of agency. *Bricolage* is 'prior' (Lévi-Strauss, 1966, p. 16) to scientific forms of thought and therefore supplies the building blocks which have allowed the *engineer* to come into being. The ideological influence exerted by this position is a powerful one insofar as it validates and reinforces the role of the *bricoleur*. Any cultural bias towards the privileging of science in contemporary Western culture is undermined in a model of agency that places the two types side by side, with aesthetic modes of agency being causally deterministic of scientific modes. This implies the need for a re-evaluation of the ideological assumptions underpinning conceptions of decision-making behaviour, suggesting the importance of aesthetic sensibility as a precursor to systematic thought.

So where does this lead us in terms of thinking about effective pedagogy? Where should teachers be placed in terms of their agency? The managerial view of education suggests that the teacher as *engineer* may be desirable insofar as s/he is more likely to comply with specified methods, follow rules and fit in with the expectations of seniors; all of which may be regarded as harmonious attributes for participants in an orderly, traditional form of educational organisation. This paradigm resonates with now largely outmoded perceptions of teaching as a set of behaviours and knowledge that can be inculcated through a straightforward training process (Mitchell, 2013). It may also contradict the understanding of

what teacher agency means, in schemas where agency is conceived of as being disruptive, inquiring, intellectually demanding and powerful (Buchanan, 2015; Robinson, 2012).

Teachers as *bricoleurs*, on the other hand, as we have already suggested, are much more likely to be active and individualistic in their professional practice, to pursue an eclectic range of methods, to be aware of curriculum and policy demands but to follow their instincts when it comes to doing what they believe is best for their learners. This is, arguably, a problematic state of affairs not only for teacher educators but also for school managers, at least within the scope of traditional ‘top down’ forms of organisation and management, though perhaps a dose of *bricolage* in the professional practice of teacher educators and school leaders might go some way to ameliorate the difficulty. After all, social practices and professional discourse are contagious and prescriptive frameworks are intended to breed conformity rather than autonomy (Kennedy, 2007; Kennedy & Doherty, 2012). If we agree that creativity, flexibility and empowerment are positive educational outcomes for teachers and learners alike, this implies that these characteristics should be core values throughout the education system.

Democratic, engaged, creative teachers have the potential to create these same qualities in their classrooms, in the minds of their learners. Compliant, narrowly focussed teachers utilising repetitive, predetermined strategies and curricula may, analogously, be more likely to reproduce these qualities in learners too. Clearly, then, the *bricoleur* and *engineer*, when considered as forms of agency, carry with them distinct and complex implications directly related to the political context under which they operate.

Teacher as bricoleur: dissent and possibility

In analysis of teacher professionalism in recent times, there has been a general recognition of the practice of teachers being an eclectic assemblage of skills, strategies and resources. These are mediated through school ethos, curricular demands, educational policy and changing notions of professional standards and competence. These many variables result in unique and individualistic teaching methodologies applied in classrooms (see for example Gewirtz, et al., 2009; Grant & Sleeter, 1985; Mulcahy, 2011; Parker, 2015; Townsend & Bates, 2007). This is teacher bricolage in action and, on the whole, the desirability of this form of agency is regarded in a positive light within the literature.

However, there are dissenting voices. In her discussion of the work of teachers as a form of *bricolage*, Hatton (1988) argues that as *bricoleurs*, teachers experience a narrowing of field that hampers the accuracy and quality of their outputs. Teachers' practice suffers, she contends, from an overabundance of practical concerns that actively exclude abstract, theoretical awareness from day to day practice in schools.

This state of affairs is predicated on the most basic need to survive amidst the competing pressures and exigencies of the classroom. This means that techniques for practical problem solving are garnered from discussions with and observations of colleagues, from personal experiences prior to teaching, from modelling witnessed during teachers' own school years and similarly unsystematic and potentially unreliable sources which create the kind of professional vulnerability Lasky (2005) discusses in her research into occupational socialisation of new entrants to the teaching profession.

Hatton goes on to charge teachers with innate conservatism, limited creativity and a general tendency to *ad hocism*, each of which implies a lack of rigour, intentionality and depth in teaching practice. Her solution to this litany of misdemeanours is deceptively straightforward: teacher educators must allow prospective teachers to engage with theory

more meaningfully during their initial teacher education. They must be allowed to take the time to embed a range of theory in their repertoire of teaching knowledge and tools but, more importantly, teacher educators should reflect on their role in challenging preservice teachers ‘to develop adequate orientations, attitudes and values which would allow them to move students beyond concerns with technique and survival to become ethical, competent practitioners’ (Hatton, 1988, p. 351). The implicit danger, as Hatton perceives it, is that in the stressful early stages of their careers, teachers fall into unhealthy habits (gathered through *bricolage*) that prevent them from recognising the wider possibilities for good pedagogical practice. When they have established a set of classroom practices that have become familiar and comfortable, these are implemented as a matter of course year on year, resulting in the undesirable attributes noted above, as well as other concerns. For Hatton, then, the idea of teacher as *bricoleur* is an overwhelmingly negative phenomenon, and one which needs to be subverted in order to restore teaching to its rightful place as a vocation with the highest and most consistent standards of professionalism. As she implies, one solution to this challenge may lie in the reconceptualisation of the role of the teacher.

In alignment with international perspectives on teacher development and teacher education reform (Creemers, et al., 2013; Menter & Hulme, 2011; Wang, et al., 2010), the Donaldson Review, ‘Teaching Scotland’s Future’ (2011), takes a complex view of the requirements of the teaching profession, seeing the role of the teacher as extending beyond ‘narrow interpretations’ (p.5) where a teacher’s work is confined to working with young learners. The review presents a multifaceted vision of teacher as researcher, theoretician and peer educator, as well as leader of learning for young people. This role as an ‘extended professional’ (p.5) makes high demands on teachers, particularly during their initial teacher education phase, but also accentuates the benefits of continuing professional development as a core aspect of practice throughout every teacher’s career: ‘[t]eacher education should be seen as and should

operate as a continuum, spanning a career and requiring much better alignment across and much closer working amongst schools, authorities, universities and national organisations.’ (p.28) There is little sense of a need for systematisation implied in this statement; rather, it advocates the need for better communication between the organisational structures involved in teaching and teacher education without any specification of what form this should take. In fact, it could be regarded as a highly ambiguous and generic description of what the review sees as a desirable mode of working for teachers. This very lack of specificity should offer further scope for teachers to follow their interests, share their practices, learn from colleagues and continue the process of professional *bricolage* on an ongoing basis throughout their careers. It is primarily a view that promotes the need for teachers to have a strong sense of their own identity and of their role as an unfolding, always developing professional engaged in a process of learning about teaching.

Taking this perspective, we may argue the teacher as *bricoleur* can be visualised as a developing professional undergoing continuous evolution. Far from being entropic and self-defeating as Hatton suggests, the *bricoleur’s* work has the potential to create new combinations of research, theory and practice mediated through individual teacher perceptions. Like Donaldson, Honan (2004) argues that teachers’ work need not be confined by their initial experiences of practice in schools and that they, by contrast, can and do regularly incorporate theory and policy in a positive and productive manner into their day to day activities. Honan utilises a rhizomatic conception of teachers’ continuum of practice (after Deleuze and Guattari, 1987), seeing professional learning as a series of realisations that are not necessarily linear in nature but which may be linked in highly fruitful and dynamic ways with prior knowledge. This is a process that is unpredictable by necessity and so resists any effort at systematisation.

The main problem facing teachers within such a schema lies in the fact that the ingenuity and individuality of teachers is severely restricted by a range of governing apparatuses that are specifically designed to curb their individuality and experimental urges (Honan, 2004). Textbooks and pre-packaged resources restrict teachers' sense of responsibility for creative pedagogy (Alexander, 2000). Local authority and government directives specify working practices sometimes in conflicting ways that result in unmanageable pressures for teachers (Priestley, Miller, Barrett, & Wallace, 2011). School management teams reduce teaching to a sequence of steps or familiar methods which are often, with conspicuous irony, rigorously quality assured by classroom visits (Howes, Booth, Dyson, & Frankham, 2005). Others seek to develop whole school teaching habits via such practices as instructional rounds, taking the best of what is observed in classrooms and embedding it in school-wide policy on learning and teaching (Philpott & Oates, 2015; 2017). Teaching becomes commodified (Hogan et al., 2017; Werler, 2015). In such situations as these, it becomes understandable that some teachers may be inclined to simply follow the rules, using what they already know, closing down their inventive and resourceful impulses as pedagogical *bricoleurs*. The kind of wholesale change required to alter teachers from passive deliverers of content to transformative facilitators of deep learning means there needs to be an analogous change in political and cultural context (Priestley, Miller, Barrett, & Wallace, 2011). Without creating an environment where teachers can research, develop and create their own practice in unique, personal ways, there is limited opportunity for them to become the agents of social and educational change they might otherwise be.

As we established at the outset of discussion here, knowledge is not merely discovered. It is mediated through the language or discourse which allows it to be articulated and shared. For this articulation and sharing to take place, there is a need for a defined time and space in which it can do so. The reality of teacher experience is that this aspect of practice is

subordinate to other, perhaps more pressing, demands on time and space. Often ‘the situations in which teachers work dramatically limit the scope of pedagogic knowledge they can construct’ (Wagner, 1990, p. 80). In other words, while knowledge is framed by language or discourse, the process of construction can only take place in an environment where there is both a will and appropriate conditions for it to proceed. Without the cultivation of such an environment, there can be no ecology of professional development or support for teacher agency (Biesta, Priestley, & Robinson, 2016).

Teacher learning communities and similar initiatives go some way to creating such conditions, offering scope for working with colleagues to learn from good practice and focus on particular aspects of teaching (Hargreaves, et al., 2013). However, these initiatives are also problematised in a number of ways, including by the fact that they are sometimes imposed on teachers by management (in other words, they form part of the school leadership’s drive for systemic pedagogical homogeneity), that there is insufficient consideration of time constraints resulting in workload issues, and that practice can be given precedence over theory, creating or perpetuating a mechanistic view of education (Hargreaves, 2013). Consequently, these initiatives may only answer the problem in a superficial manner, creating as many difficulties as they solve and potentially more.

It is a fundamental paradox of teaching that teachers, who have the potential to be creative individuals, are placed, and asked to function productively and with a continuous sense of the importance of their role, within a schooling system that often seems to constrain them and reduce their capacity for creativity. Whether this combination of individual and system contributes to harmonious outcomes for both individual and system or simply forces individuals to become less individual is a more difficult issue to explore. Johnson argues that ‘[t]he marginality of the bricoleur is also his singularity: he works alone and independently of the institutionalized division of labour which defines the modern scientist or engineer’

(Johnson, 2012, p. 367). This view positions the *bricoleur* as necessarily excluded from a simplified, standardised, reproducible form of practice.

Perhaps, then, we should see schools not so much as educational administrative systems but more as flexible educational cultures that permit a degree of creativity, though this within certain bounds that would need to be agreed from within, in order for the culture to maintain its unique, organic character. Arguably, teachers who are able to continue to flexibly adapt their practices, whilst taking account of the plethora of conflicting demands they are asked to accommodate during the day to day experience of their working lives, may be more likely to become highly skilled, reflective and effective practitioners. To exist within the challenging, conflicting demands of the system (or culture) in a manner that is more than mere professional survival requires traits such as resilience, resourcefulness and confidence, none of which are a requirement in a technicist view of teaching (MacGill & Whitehead, 2011).

Implications

How we conceptualise the formation and sharing of knowledge is core to our understandings of what teaching is and how it is, or should be, done. While the process of formal education does not focus on resolving a physical problem or immediate need, it does perform the vital social function of enabling thought and communication to operate effectively within a community. In essence, that is what teaching consists of; the sharing of values, the dissemination of understandings and the articulation of perceptions. Without this sharing and articulation, formal education as we know it could not exist. This coincides with Lévi-Strauss's explication of the social construction of learning, framed in the idea of the *bricoleur*.

Bricolage offers a way of considering teaching not merely as a set of behaviours that determine certain outcomes, but as a concatenation of possibilities, realised in an infinite number of permutations by those who operate successfully within the teaching profession. The potential for creativity, within this view, is limitless; opportunity for the kind of transformative educational action encouraged by critical pedagogies (Rodriguez, 2008) is similarly boundless.

Yet, this theoretical potential must stand its ground when faced with pragmatic reality. The challenges for teachers in realising the potential of their own practice are, as has been indicated, diverse. The conflict between individual and system problematises teacher agency in such a way that the realisation of the many restraints placed on practice may limit teachers' sense of their professional autonomy. This negatively impacts their sense of engagement with their work (Skaalvik & Skaalvik, 2014). Their creative impulses dwindle. They become bystanders (Thwaites, 2015) rather than active *bricoleurs*. How, then, are we to make it possible for teachers to overcome these challenges?

Perhaps a solution may lie in welcoming diversity and reinforcing teachers' appreciation of their own individuality, supporting the development of a professional identity that is consciously guided in this direction during the early phase of teachers' careers (De Stercke, Goyette, & Robertson, 2015) as well as subsequently. Another suggestion is that it may be valuable to consider more meaningful engagement with how we can enhance teachers' awareness of their professional efficacy and sense of making a difference to the lives of their learners (Pedota, 2015). These philosophical and motivational dimensions are complex and require further research.

To summarise, the way in which we, as educators, choose to engage with our learners and to offer opportunities to share knowledge of both the physical world and the world of ideas

remains distinctive to each of us. This underscores the privileged position of teachers as creative professionals. The artisan quality of teachers' practice, gained through experience, association and personal commitment, makes possible a visualisation of teacher professionalism as *bricolage* and agency combined in an aesthetically singular fusion. To understand the kind of enhanced teacher professionalism articulated in the Donaldson Review (2011) and elsewhere (for example Carr & Skinner, 2009; Gewirtz, et al., 2009; Kennedy, 2007; Kosnik & Beck, 2009; Parker, 2015; Schleicher, 2011) is to recognise the value of idiosyncratically obtained and retained professional knowledge and the importance of resourceful, purposeful action applied in an educational context.

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Table 1: Attributes of the bricoleur and engineer

Table 1:	Bricoleur	Engineer
	subjective	objective
	aesthetic	scientific
	disorderly	systematic
	playful	precise
	experiential	methodological
	individualistic	authoritarian
	free	controlled
	moral	amoral
	perceptive	concept led
	innovative	procedural